

APPENDIX B

D

Blast Result



Blast 2 Sequences results

PubMed

Entrez

BLAST

OMIM

Taxonomy

Structure

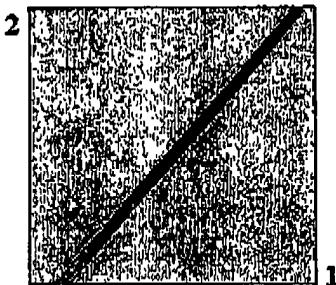
BLAST 2 SEQUENCES RESULTS VERSION BLASTN 2.2.4 [Aug-26-2002]

Match: 1 Mismatch: -2 gap open: 5 gap extension: 2

x_dropoff: 50 expect: 10000 wordsize: 11 Filter

Sequence 1 lcl|seq_1 Length 6308 (1 .. 6308)

Sequence 2 lcl|seq_2 Length 5205 (1 .. 5205)



NOTE: The statistics (bitscore and expect value) is calculated based on the size of nr database

NOTE: If protein translation is reversed, please repeat the search with reverse strand of the query sequence

Score = 8715 bits (4527), Expect = 0.0

Identities = 4529/4530 (99%)

Strand = Plus / Plus

Query: 1416 gtcataatacagctacaaagagctttga ctgtgagctcgcaagaggcccagttgcataacc 1475
 Sbjct: 676 gtcataatacagctacaaagagctttga ctgtgagctcgcaagaggcccagttgcataacc 735

Query: 1476 actgccattgacaaaagagggtcgccggc tgtaaagcgggagttatgtgtgttgcag 1535
 Sbjct: 736 actgccattgacaaaagagggtcgccggc tgtaaagcgggagttatgtgtgttgcag 795

Query: 1536 gaagcaaaggaagatataaagagtcatc agaaaaatgtctcaacatccacttcatgta 1595
 Sbjct: 796 gaagcaaaggaagatataaagagtcatc agaaaaatgtctcaacatccacttcatgta 855

Query: 1596 gaagtattacactcagagattatggctca tcagaaaatttgcttgcgtttggttcctgg 1655
 Sbjct: 856 gaagtattacactcagagattatggctca tcagaaaatttgcttgcgtttggttcctgg 915

Query: 1656 atgaacaaaattatgagcttcaagtga ctttaggcagatctttgcacaaggcatgcctt 1715
 Sbjct: 916 atgaacaaaattatgagcttcaagtga ctttaggcagatctttgcacaaggcatgcctt 975

Blast Result

Query: 1716 agagaagaacacctgactcgagaatccctg ttcataagcaggtaatgcgttggatgca 1775
||||||| ||||||| ||||||| |||||||
Sbjct: 976 agagaagaacacctgactcgagaatccctg ttcataagcaggtaatgcgttggatgca 1035

Query: 1776 aagctttataaaagggtggccgtaaagatcct tcatgaatttgcatttcaggattttttatg 1835
Start: 1036 aacgtttataaaagggtggccgtaaagatcct tcatgaatttgcatttcaggattttttatg 1095

Query: 1836 gagatgaaataaaaaactttgtat ggaatttgtaagtattataaacaactgcag 1895
||||||| ||||||| ||||||| ||||||| |||||||
Sbjct: 1096 gagatgaaataaaaaactttgtat ggaatttgtaagtattataaacaactgcag 1155

Query: 1896 aaagaatatacgtgatgatcatgacag aagtatcttataactgcactttcagttcag 1955
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Sbjct: 1156 aaagaatatacgtgatgatcatgacag aagtatcttataactgcactttcagttcag 1215

Query: 1956 atgtttactgttctactctggatcgaca tcttattgaagagcagaatgttatctctgtc 2015
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Sbjct: 1216 atgtttactgttctactctggatcgaca tcttattgaagagcagaatgttatctctgtc 1275

Query: 2016 attactgaaactctgttagaagtttacc tgagtacttggacaggaacaataattcaac 2075
||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct: 1276 attactgaaactctgttagaagtttacc tgagtacttggacaggaacaataattcaac 1335

Query: 2076 ttccagggttatagccaggacaaattggg aagagtatatgcagtaataatgtgacctaaag 2135
Shift: 1336 ttccagggttatagccaggacaaattggg aagagtatatgcagtaataatgtgacctaaag 1395

Query: 2136 tataccctgtatcgaaacccacaatatg gacagaaaagattaagaatgcaggttccttggaa 2195
 ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Subject: 1396 tataccctgtatcgaaacccacaatatg gacagaaaagattaagaatgcaggttccttggaa 1455

Query: 2196 ggttttcgatctttttgaagattttac ctgttatgcaggaaatggaaagaaatccgaaaa 2255
||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct: 1456 ggttttcgatctttttgaagattttac ctgttatgcaggaaatggaaagaaatccgaaaa 1515

Query: 2256 cagggtgggcaacacattgaagtggatcc tgattggaggctgccattgtctatacagatg 2315
Shift: 1516 cagggtgggcaacacattgaagtggatcc tgattggaggctgccattgtctatacagatg 1575

Query: 2316 caattgaagaatatttactcatgttcca agagtggtgtgtttgtatgaagaactctta 2375
||||||| ||||||| ||||| ||||| ||||| |||||
Sbjct: 1576 caattgaagaatatttactcatgttcca aqagtgttgtgtttgtatgaagaactctta 1635

Query: 2376 ctgtggctataaagaatgtcacaaagc tgtgatgagggtgcagtaccagttcatatct 2435
Subject: 1626 ttgtggctataaagaatgtcacaaagc tgtgatgagggtgcagtaccagttcatatct 1695

Query: 2436 agtagcaagacagtagtacaatcggtgg acatagtttgaaacaaagtcc tacagagta 2495

Blast Result

Subjct: 1696 agtagcaagacagtagtacaatcggtgg acatagttggaaacaaaagttoctacagaga 1755

Query: 2496 tctgaggatcttgcatacatctgcc actctcttaggacccttgcgtggttcatgta 2555
||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Sbjct: 1756 tctgaggatcttgcatacatctgcc actctcttaggacccttgcgtggttcatgta 1815

Query: 2556 cgtttaagcaggctgggtctgttcaag actgcataatgtgttttggggacttt 2615
Sbjct: 1816 cgtttaagcaggctgggtctgttcaag actgcataatgtgttttggggacttt 1875

Query: 2616 caagttagaggtaactgtggaatatcctt acgttgtctgggttggttgcagggtgtt 2675
Sbjct: 1876 caaqtqaqactactgtggaatatcctt acgttgtctgggttggttgcagggtgtt 1935

Query: 2676 gctgagatgtggcgaagaaatggactgtc tcttatttagccagggttttattaccaagat 2735
||||||| ||||||| ||||||| ||||||| |||||||
Sbjct: 1936 actgagatgtggcgaagaaatggactgtc tcttatttagccagggttttattaccaagat 1995

Query: 2736 gttaaagtgcagagaagaatgtatgataa agatatcatcatgcttcagattgggtgcacatct 2795
||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct: 1996 attaagtgcagagaagaatgtatgataa agatatcatcatgcttcagattgggtgcacatct 2055

Query: 2796 ttaatggatcccaataagttcttgtaact ggtacttcagaggtatgaacttgcgcaggct 2855
Shift: 2056 ttaatggatcccaataaaqtctttgtact ggtacttcagaggtatgaacttgcgcaggct 2115

Query: 2856 tttaacaagaccatatctacaaaagacca ggatttgattaaacaatataatcacactaata 2915
Sbjct: 2116 tttaacaagaccatatctacaaaagacca ggatttgattaaacaatataatcacactaata 2175

Query: 2916 gaagaaaatgttcaaggcctcatctatat tgtgggtgagcgttatgtacctggagttggaa 2975
Sbjct: 2176 aaagaaaatgttcaaggcctcatctatat tgtgggtgagcgttatgtacctggagttggaa 2235

Query: 2976 aatgtgacccaaagaagaggtcacaatgag agaaatcattcaactgtcttgattgaaccc 3035
Sbjct: 2236 aatgtgacccaaagaagaggtcacaatqag agaaatcattcaactgtcttgattgaaccc 2295

Query: 3036 atgccacacagtgccattgcaaaaattt acctgagaatgaaaataatgaaactggctta 3095
Subject: 2296 atgccacacagtgccattgcaaaaattt acctgagaatqaaaataatgaaactggctta 2355

Query: 3096 gagaatgtcataaacaaaagtggccacatt taagaaaaccagggtgtatcaggccatggagtt 3155
Subject: 2356 gagaatgtcataaacaaaagtggccacatt taagaaaaccagggtgtatcaggccatggagtt 2415

Query: 3156 tatgaactaaaagatgaatcactgaaaga cttcaaatatgtacttttatcattactccaaa 3215
 ||||||| ||||| ||||| ||||| ||||| |||||
Subject: 2416 tatgaactaaaagatgaatcactgaaaga cttcaaatatgtacttttatcattactccaaa 2475

Blast Result

Query: 3216 acccagcatagcaaggctgaacatatatgc gaagaaaaggagaaaacaagaaaacaagat 3275
|||||||
Sbjct: 2476 acccagcatagcaaggctgaacatatatgc gaagaaaaggagaaaacaagaaaacaagat 2535

Query: 3276 gaagcattgccgccaccaccacccctcga attctgcctgtttcagcaaagtgattaac 3335
|||||||
Sbjct: 2536 gaagcattgccgccaccaccacccctcga attctgcctgtttcagcaaagtgattaac 2595

Query: 3336 cttctcaactgtgatatcatgatgtacat ttcaggaccgtattttagcgggcaatagac 3395
|||||||
Sbjct: 2596 cttctcaactgtgatatcatgatgtacat ttcaggaccgtattttagcgggcaatagac 2655

Query: 3396 acagattctaacctgtggaccgaaggat gtcCAAATGGCTTTCAATTCTGGCATTG 3455
|||||||
Sbjct: 2656 acagattctaacctgtggaccgaaggat gtcCAAATGGCTTTCAATTCTGGCATTG 2715

Query: 3456 ggTTTACTAGAAGAGAAGCAACAGCTTC AAAAGCTCCTGAAGAAGTAACATTGAC 3515
|||||||
Sbjct: 2716 ggTTTACTAGAAGAGAAGCAACAGCTTC AAAAGCTCCTGAAGAAGTAACATTGAC 2775

Query: 3516 TTTATCATAAGGCTTCAGATTGGAAAG TTCAGCCATGAATATAACAAATGCTTTGGAA 3575
|||||||
Sbjct: 2776 TTTATCATAAGGCTTCAGATTGGAAAG TTCAGCCATGAATATAACAAATGCTTTGGAA 2835

Query: 3576 AAACTCAAAGGAATTCCCCAGTTAGAAGG CCAGAAGGACATGATAACGTGGACTTCAG 3635
|||||||
Sbjct: 2836 AAACTCAAAGGAATTCCCCAGTTAGAAGG CCAGAAGGACATGATAACGTGGACTTCAG 2895

Query: 3636 ATGTTGACACAGTGAAGCGATTAAGAGA AAAATTTGTTAATTGTAGCAACCACATCA 3695
|||||||
Sbjct: 2896 ATGTTGACACAGTGAAGCGATTAAGAGA AAAATTTGTTAATTGTAGCAACCACATCA 2955

Query: 3696 GGATCGGAATCTATTAGAATGATGAGAT TACTCATGATAAAGAAAAAGCAGAACGAAAA 3755
|||||||
Sbjct: 2956 GGATCGGAATCTATTAGAATGATGAGAT TACTCATGATAAAGAAAAAGCAGAACGAAAA 3015

Query: 3756 AGAAAAGCTGAAGCTGCTAGGCTACATCG CCAGAAGATCATGGCTCAGATGTCTGCCTTA 3815
|||||||
Sbjct: 3016 AGAAAAGCTGAAGCTGCTAGGCTACATCG CCAGAAGATCATGGCTCAGATGTCTGCCTTA 3075

Query: 3816 CAGAAAAACTCATTGAAACTCATAAACT CATGTATGACAATACATCAGAAATGCCTGGG 3875
|||||||
Sbjct: 3076 CAGAAAAACTCATTGAAACTCATAAACT CATGTATGACAATACATCAGAAATGCCTGGG 3135

Query: 3876 AAAGAAGATTCCATTATGGAGGAAGAGAG CACCCAGCAGTCAGTGACTACTCTAGAATT 3935
|||||||
Sbjct: 3136 AAAGAAGATTCCATTATGGAGGAAGAGAG CACCCAGCAGTCAGTGACTACTCTAGAATT 3195

Query: 3936 GCTTGGGTCTAAACGGGGTCCATCTGT TAATGAAAAGGAGGTGCTGACGTGCATCCTT 3995
|||||||
Sbjct: 3196 GCTTGGGTCTAAACGGGGTCCATCTGT TAATGAAAAGGAGGTGCTGACGTGCATCCTT 3255

Blast Result

Query: 3996 tgccaagaagaacaggaggtaaaaataga aaataatgccatggtattatcgccctgtgtc 4055
Sbjct: 3256 tgccaagaagaacaggaggtaaaaataga aaataatgccatggtattatcgccctgtgtc 3315

Query: 4056 cagaaatctactgccttaacccagcacag gggaaaacccatagaactctcaggagaagcc 4115
Sbjct: 3316 cagaaatctactgccttaacccagcacag gggaaaacccatagaactctcaggagaagcc 3375

Query: 4116 ctagacccactttcatggatccagactt ggcatatggaacttatacaggaagctgttgt 4175
Sbjct: 3376 ctagacccactttcatggatccagactt ggcatatggaacttatacaggaagctgttgt 3435

Query: 4176 catgtaatgcacgcagtgtgtggcagaa gtattttgaagctgtacagctgagcttcag 4235
Sbjct: 3436 catgtaatgcacgcagtgtgtggcagaa gtattttgaagctgtacagctgagcttcag 3495

Query: 4236 cagcgcattcatgttgcacccctttgactt ggaaaagtggagaatatcttgcctcttgc 4295
Sbjct: 3496 cagcgcattcatgttgcacccctttgactt ggaaaagtggagaatatcttgcctcttgc 3555

Query: 4296 aaatctctgtgcaataactgtgatccccat tattcctttgcacccctaaaaagataaaacagt 4355
Sbjct: 3556 aaatctctgtgcaataactgtgatccccat tattcctttgcacccctaaaaagataaaacagt 3615

Query: 4356 gagaatgcagatgtttgtcaactttt gaccctggcacggtgatacagactgttgt 4415
Sbjct: 3616 gagaatgcagatgtttgtcaactttt gaccctggcacggtgatacagactgttgt 3675

Query: 4416 gccagaatatcaggttataatataagaca tgctaaaggagaaaacccaaatccatttc 4475
Sbjct: 3676 gccagaatatcaggttataatataagaca tgctaaaggagaaaacccaaatccatttc 3735

Query: 4476 tttaatcaaggaatggagattctacttt ggagttccattccatctgagttttggcgtt 4535
Sbjct: 3736 tttaatcaaggaatggagattctacttt ggagttccattccatctgagttttggcgtt 3795

Query: 4536 gagtcgtcgattaaatattcaaatacgat caagggaaatggttattctcttgcacaca 4595
Sbjct: 3796 gagtcgtcgattaaatattcaaatacgat caagggaaatggttattctcttgcacaca 3855

Query: 4596 atttatagaattggattgaaagtgcacc tgatgaaaggatcctcgagtcggatgt 4655
Sbjct: 3856 atttatagaattggattgaaagtgcacc tgatgaaaggatcctcgagtcggatgt 3915

Query: 4656 acctggagcacctgcgtttcaactatcca ggcaattgaaaatctattgggagatgaagga 4715
Sbjct: 3916 acctggagcacctgcgtttcaactatcca ggcaattgaaaatctattgggagatgaagga 3975

Query: 4716 aaacctctgtttggagcactcaaaatag gcagcataatggtctgaaagcattaatgcag 4775

Blast Résult

Sbjct: 3976 aaacctctgtttggagcacttcaaaatag gcagcataatggtctgaaaggcattaatgcag 4035

Query: 4776 ttgcgttgcacagaggattacctgtcc tcaggtctgtatacagaacatctggtttgt 4835
|||||||
ttgcgttgcacagaggattacctgtcc tcaggtctgtatacagaacatctggtttgt 4835

Query: 4836 cttcttatcagttgttattccataacataaa atcagaagatacaccatgccttgtctata 4895
||||||| ||||| ||||| ||||| ||||| ||||| |||||
Subject: 1026 ctteratcagttgttattccataacataaa atcagaagatacaccatgccttgtctata 4155

Query: 4896 gatctgtttcatgtttggggatgtgtt gtagcattccatccatgttattggatgac 4955
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Subject: 4156 gatctgtttcatgtttggggatgtgtt gtagcattccatccatgttattggatgac 4215

Query: 5016 ttgatcaccatggcacacatgttcagat actacttacagttagacacaggcttccccctt 5075
Sbjct: 4276 ttgatcaccatggcacacatgttcagat actacttacagttagacacaggcttccccctt 4335

Query: 5076 gctcagggttcaagaagacagtgaagaggc tcattccgcatcttcttttttcggaaaaatt 5135
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Subject: 4336 gctcagggttcaagaagacagtgaagaggc tcattccgcatcttcttttttcggaaaaatt 4395

Query: 5136 tctcaatataacaagtggctccattgggtg tgatattcctggctggatatttgggtctca 5195
||| ||| ||| ||| ||| ||| ||| |||
Sbjct: 4396 tctcaatataacaagtggctccattgggtg tgatattcctggctggatatttgggtctca 4455

Query: 5196 ctgaagaatggcatcccccttatcttcg ctgtgatgcatttttccactatattactt 5255
||||||| ||||| ||||| ||||| ||||| |||||
Sbjct: 4456 ctgaagaatggcatcccccttatcttcg ctgtgatgcatttttccactatattactt 4515

Query: 5256 gggtaactccgctgaggaactgcatac caattctgcagaaggagagtacagtgcactc 5315
Sbjct: 4516 gggtaactccgctgaggaactgcatac caattctgcagaaggagagtacagtgcactc 4575

Query: 5376 gtaaggcccttgcctcagagggtggtgtgc agatcctgccttactaaaactgtttgaagcaa 5435
Sbjct: 4636 gtaaggcccttactccaaqagggggtgtgc agatcctgccttactaaaactgtttgaagcaa 4695

Query: 5436 aaaaacaccgtggtcaggtaccctagaaa aagaaatagttgatagagcttctgtatgac 5495
||||||| ||||||| ||||||| ||||||| |||||||
Sbjct: 4696 aaaaacaccatgtcaaggataccctagaaa aagaaatagttgatagagcttctgtatgac 4755

Blast Result

Query: 5496 tatacgcttcatgaatcaagtttctca tttcagggtccccacggtctgcagatgatgag 5555
Sbjct: 4756 tatacgcttcatgaatcaagtttctca tttcagggtccccacggtctgcagatgatgag 4815

Query: 5556 cgaaagcatcctgttccttcgtttctg tggggctataactatgttctcagaacattgc 5615
Sbjct: 4816 cgaaagcatcctgttccttcgtttctg tggggctataactatgttctcagaacattgc 4875

Query: 5616 tgccaggaaattgtgaacggggaaagaggt tggagcttgcattttcacgcacttcaactgt 5675
Sbjct: 4876 tgccaggaaattgtgaacggggaaagaggt tggagcttgcattttcacgcacttcaactgt 4935

Query: 5676 ggagccggagtctgcattttctaaaaat cagagaatgccgagtggctctgggtgaaggt 5735
Sbjct: 4936 ggagccggagtctgcattttctaaaaat cagagaatgccgagtggctctgggtgaaggt 4995

Query: 5736 aaagccagaggctgtgcctatccagctcc ttacttggatgaatatggagaaacagacact 5795
Sbjct: 4996 aaagccagaggctgtgcctatccagctcc ttacttggatgaatatggagaaacagacact 5055

Query: 5796 ggcctgaagagggcaaccccccattt atctcgtagcggtatcggaaagctccatttg 5855
Sbjct: 5056 ggcctgaagagggcaaccccccattt atctcgtagcggtatcggaaagctccatttg 5115

Query: 5856 gtctggcaacaadactgcattatagaaga gattgttaggagccaagagactaatcagatg 5915
Sbjct: 5116 gtctggcaacaacactgcattatagaaga gattgttaggagccaagagactaatcagatg 5175

Query: 5916 ttatggattcaactggcagttactgtg a 5945

Sbjct: 5176 ttatggattcaactggcagttactgtg a 5205

Score = 1271 bits (660), Expect = 0.0

Identities = 660/660 (100%)

Strand = Plus / Plus

Query: 696 atggcgacgaggaggctggaggtactga gaggatggaaatcagcgccggttacccag 755

Sbjct: 1 atggcgacgaggaggctggaggtactga gaggatggaaatcagcgccggttacccag 60

Query: 756 acccctcagcgtctggcatctggggta tcagcaagttgatttatactgcatttttg 815

Sbjct: 61 acccctcagcgtctggcatctggggta tcagcaagttgatttatactgcatttttg 120

Query: 816 catcatttggcacaattggtgcagaaat ttactttgtgaaatggaccaggacttggaa 875

Sbjct: 121 catcatttggcacaattggtgcagaaat ttactttgtgaaatggaccaggacttggaa 180

Query: 876 aaggcaggaggaaagtgtacaaatgtcaat attcactccactgaaatggactttttggaa 935

Blast Result

Sbjct: 181 aagcaggaggaaagtgtacaaatgtcaat attcactccactggaatggacttatttgg 240

Query: 936 gaagatccagatattgcttagagaaaatt gaagcacagtggagcatttcagcttgcggg 995

Sbjct: 241 gaagatccagatattgcttagagaaaatt gaagcacagtggagcatttcagcttgcggg 300

Query: 996 agggtttcaaaagtggagagacaaccta ttcttgaggattgtcaattgtatccaaca 1055

Sbjct: 301 agggtttcaaaagtggagagacaaccta ttcttgaggattgtcaattgtatccaaca 360

Query: 1056 tgtgtactctgtatggactgttccagga cagtgttataaaaatcatcgtaaagatg 1115

Sbjct: 361 tgtgtactctgtatggactgttccagga cagtgttataaaaatcatcgtaaagatg 420

Query: 1116 catacttctactggaggagggttctgtga ctgtggagacacagaggcatggaaaactggc 1175

Sbjct: 421 catacttctactggaggagggttctgtga ctgtggagacacagaggcatggaaaactggc 480

Query: 1176 ctttttgttaaatcatgaacctggaaag agcaggtaactataaaagagaattcacgctgt 1235

Sbjct: 481 ctttttgttaaatcatgaacctggaaag agcaggtaactataaaagagaattcacgctgt 540

Query: 1236 ccgttgaatgaagaggtaatgtccaagc caggaaaatatttccttcagtgataaaatat 1295

Sbjct: 541 ccgttgaatgaagaggtaatgtccaagc caggaaaatatttccttcagtgataaaatat 600

Query: 1296 gtcgtagaaaatgactatatggaaagagga aaaagaactgcctcctgaactccagataagg 1355

Sbjct: 601 gtcgtagaaaatgactatatggaaagagga aaaagaactgcctcctgaactccagataagg 660

CPU time: 0.17 user secs. 0.04 sys. secs 0.21 total secs.

Lambda	K	H
1.33	0.621	1.13

Gapped

Lambda	K	H
1.33	0.621	1.13

Matrix: blastn matrix:1 -2
 Gap Penalties: Existence: 5, Extension: 2
 Number of Hits to DB: 31
 Number of Sequences: 0
 Number of extensions: 31
 Number of successful extensions: 6
 Number of sequences better than 10000.0: 1
 length of query: 5205
 length of database: 7,880,065,999
 effective HSP length: 26
 effective length of query: 5179
 effective length of database: 7,880,065,973
 effective search space: 40810861674167
 effective search space used: 40810861674167
 T: 0

MAY. 27. 2003 8:57PM

MARSHALL GERSTEIN

NO. 942

P. 36/40

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Blast Result

A: 0
X1: 6 (11.6 bits)
X2: 25 (48.1 bits)
S1: 12 (23.8 bits)
S2: 17 (33.4 bits)

D

Blast Result



Blast 2 Sequences results

[PubMed](#)[Entrez](#)[BLAST](#)[OMIM](#)[Taxonomy](#)[Structure](#)

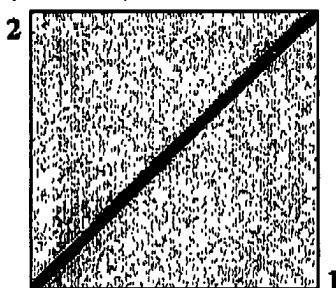
BLAST 2 SEQUENCES RESULTS VERSION BLASTP 2.2.4 [Aug-26-2002]

Matrix **BLOSUM62** gap open: **11** gap extension: **1**

x_dropoff: **50** expect: **10000** wordsize: **3** Filter

Sequence 1 lcl|seq_1 Length 1749 (1 .. 1749)

Sequence 2 lcl|seq_2 Length 1734 (1 .. 1734)



NOTE: The statistics (bitscore and expect value) is calculated based on the size of nr database

Score = 3500 bits (9076), Expect = 0.0
Identities = 1728/1749 (98%), Positives = 1728/1749 (98%), Gaps = 20/1749 (1%)

Query: 1	MADEEAGGTERMEISAEQPOTPQR LASWW DQQVDFYTAFLHHLAQLVPEIYFAEMDPDLE 60
Sbjct: 6	MADEEAGGTERMEISAEQPOTPQR LASWW DQQVDFYTAFLHHLAQLVPEIYFAEMDPDLE 65
Query: 61	KQEESVQMSIFTPLEWYLFGEDPDIC LEK LKHSGAFQLCGRVFKSGETTYSCRDCAIDPT 120
Sbjct: 66	KQEESVQMSIFTPLEWYLFGEDPDIC LEK LKHSGAFQLCGRVFKSGETTYSCRDCAIDPT 125
Query: 121	CVLCMDCFQDSVHKNHR YKMH TSTGGGFC DCGDT EAWKTGPFCVNHEPGRAGTI KENSRC 180
Sbjct: 126	CVLCMDCFQDSVHKNHR YKMH TSTGGGFC DCGDT EAWKTGPFCVNHEPGRAGTI KENSRC 185
Query: 181	PLNEEVIVQARKIFPSVIKYV VEMTIWEE EKELPPFELQIREKNERYYCVL FNDEHHSYDH 240
Sbjct: 186	PLNEEVIVQARKIFPSVIKYV VEMTIWEE EKELPPFELQIREKNERYYCVL FNDEHHSYDH 245
Query: 241	VIYSLQRALDCELAEAQLHTTAIDKEGRR AVKAGAYAAC QEA KEDI KSHSENV SQHPLHV 300
Sbjct: 246	VIYSLQRALDCELAEAQLHTTAIDKEGRR AVKAGAYAAC QEA KEDI KSHSENV SQHPLHV 305
Query: 301	EVLHSEIMAHQKFALRLGSWMNKIMSYSS DFRQIFCQACLREEPDSEN PCLISRLMLWDA 360
Sbjct: 306	EVLHSEIMAHQKFALRLGSWMNKIMSYSS DFRQIFCQACLREEPDSEN PCLISRLMLWDA 365
Query: 361	KLYKGARKILHELIFSSFFMEMEYKKLFA MEFVKYYKQLQKEYISDDHRSISITALSVQ 420
Sbjct: 366	KLYKGARKILHELIFSSFFMEMEYKKLFA MEFVKYYKQLQKEYISDDHRSISITALSVQ 425
Query: 421	MFTVPTLARHLIEEQNVISVITETLLEV LPEYLD RNNKFNFQGYSQDKLGRVYAVICDLK 480

Blast Result

Sbjct: 426 MFTVPTLARHLIEEQNIVISVITETLLEVL PEYLDRNNKFNFQGYSQDKLGRVYAVICDLK
 MFTVPTLARHLIEEQNIVISVITETLLEVL PEYLDRNNKFNFQGYSQDKLGRVYAVICDLK 485

Query: 481 YILISKPTIWTERLRLMQFLEGFRSFLKIL TCMQGMEEIRRQVGQHIEVDPDWEAAIAIQM 540
 YILISKPTIWTERLRLMQFLEGFRSFLKIL TCMQGMEEIRRQVGQHIEVDPDWEAAIAIQM
 Sbjct: 486 YILISKPTIWTERLRLMQFLEGFRSFLKIL TCMQGMEEIRRQVGQHIEVDPDWEAAIAIQM 545

Query: 541 QLNILLMFQEWACDEELLLVAYKECHK AVMRCSTSFISSSKTVVQSCGHSLETKSYRV 600
 QLNILLMFQEWACDEELLLVAYKECHK AVMRCSTSFISSSKTVVQSCGHSLETKSYRV
 Sbjct: 546 QLNILLMFQEWACDEELLLVAYKECHK AVMRCSTSFISSSKTVVQSCGHSLETKSYRV 605

Query: 601 SEDLVSIELPLSRTLAGLHVRLSRLGAVS RLHEFVSFEDFQVEVLVEYPLRCLVLVAQVV 660
 SEDLVSIELPLSRTLAGLHVRLSRLGAVS RLHEFVSFEDFQVEVLVEYPLRCLVLVAQVV
 Sbjct: 606 SEDLVSIELPLSRTLAGLHVRLSRLGAVS RLHEFVSFEDFQVEVLVEYPLRCLVLVAQVV 665

Query: 661 AEMWRRNGLSLISQVFYYQDVKCREEMYD KDIIMLQIGASLMDPNKFLLLVLQRYELAEA 720
 AEMWRRNGLSLISQVFYYQDVKCREEMYD KDIIMLQIGASLMDPNKFLLLVLQRYELAEA
 Sbjct: 666 AEMWRRNGLSLISQVFYYQDVKCREEMYD KDIIMLQIGASLMDPNKFLLLVLQRYELAEA 725

Query: 721 FNKTISTKDQDLIKQYNTLIEEMLQVLIV IVERGYVPGVGNVTKEEVTMREIIHLLCIEP 780
 FNKTISTKDQDLIKQYNTLIEEMLQVLIV IVERGYVPGVGNVTKEEVTMREIIHLLCIEP
 Sbjct: 726 FNKTISTKDQDLIKQYNTLIEEMLQVLIV IVERGYVPGVGNVTKEEVTMREIIHLLCIEP 785

Query: 781 MPHSAIAKNLPENENNNETGLEENVINKVAT FKKPGVSGHGVGVYELKDESLKDFNMYFYHYSK 840
 MPHSAIAKNLPENENNNETGLEENVINKVAT FKKPGVSGHGVGVYELKDESLKDFNMYFYHYSK
 Sbjct: 786 MPHSAIAKNLPENENNNETGLEENVINKVAT FKKPGVSGHGVGVYELKDESLKDFNMYFYHYSK 845

Query: 841 TQHSKAEHMQKRRKQENKDEALPPPPPPEFCPAFSKVNL LNCDIMMYILRTVFERAID 900
 TQHSKAEHMQKRRKQENKDEALPPPPPPEFCPAFSKVNL LNCDIMMYILRTVFERAID
 Sbjct: 846 TQHSKAEHMQKRRKQENKDEALPPPPPPEFCPAFSKVNL LNCDIMMYILRTVFERAID 905

Query: 901 TDSNLWTEGMLQMAFHILALGLLEEKQQL QKAPEEEVTFDFYHKASRLGSSAMNIQMLE 960
 TDSNLWTEGMLQMAFHILALGLLEEKQQL QKAPEEEVTFDFYHKASRLGSSAMNIQMLE
 Sbjct: 906 TDSNLWTEGMLQMAFHILALGLLEEKQQL QKAPEEEVTFDFYHKASRLGSSAMNIQMLE 965

Query: 961 KLKGIPQLEGQKDMITWILOMQFDTVKRLR EKSCLIVATTSGSESIKNDEITHDKEKAERK 1020
 KLKGIPQLEGQKDMITWILOMQFDTVKRLR EKSCLIVATTSGSESIKNDEITHDKEKAERK
 Sbjct: 966 KLKGIPQLEGQKDMITWILOMQFDTVKRLR EKSCLIVATTSGSESIKNDEITHDKEKAERK 1025

Query: 1021 RKAEEARLHRQKIMAQMSALQKNFIETHK LMYDNTSEMPGKEDSIMEEEESTPAVDYSRI 1080
 RKAEEARLHRQKIMAQMSALQKNFIETHK LMYDNTSEMPGKEDSIMEEEESTPAVDYSRI
 Sbjct: 1026 RKAEEARLHRQKIMAQMSALQKNFIETHK LMYDNTSEMPGKEDSIMEEEESTPAVDYSRI 1085

Query: 1081 ALGPKRGPSPVTEKEVLTCAILCQEQQEVKI ENNAMVLSACVQKSTALTQHRGKPIELSGEA 1140
 ALGPKRGPSPVTEKEVLTCAILCQEQQEVKI ENNAMVLSACVQKSTALTQHRGKPIELSGEA
 Sbjct: 1086 ALGPKRGPSPVTEKEVLTCAILCQEQQEVKI ENNAMVLSACVQKSTALTQHRGKPIELSGEA 1145

Query: 1141 LDPLFMDPDLAYGTYTGSCGHVMHAVCWQ KYFEAVQLSSQQRIPHVDLFDLESGEYLCPCLC 1200
 LDPLFMDPDLAYGTYTGSCGHVMHAVCWQ KYFEAVQLSSQQRIPHVDLFDLESGEYLCPCLC
 Sbjct: 1146 LDPLFMDPDLAYGTYTGSCGHVMHAVCWQ KYFEAVQLSSQQRIPHVDLFDLESGEYLCPCLC 1205

Query: 1201 KSLCNTVIPIIPLQPQKINSENADALAQL LTLLARWIQTVLARIISGYNIRHAKGENPIPIF 1260
 KSLCNTVIPIIPLQPQKINSENADALAQL LTLLARWIQTVLARIISGYNIRHAKGENPIPIF
 Sbjct: 1206 KSLCNTVIPIIPLQPQKINSENADALAQL LTLLARWIQTVLARIISGYNIRHAKGENPIPIF 1265

Query: 1261 FNQGMGDSTLEFHSILSFGVESSIKEYNS IKEMVILFATTIYRIGLKVPDPRVPM 1320
 FNQGMGDSTLEFHSILSFGVESSIKEYNS IKEMVILFATTIYRIGLKVPDPRVPM
 Sbjct: 1266 FNQGMGDSTLEFHSILSFGVESSIKEYNS IKEMVILFATTIYRIGLKVPDPRVPM 1325

Query: 1321 TWSTCAFTIQAIENLLGDEGKPLFGALQN RQHNGLKALMQFAVAQRITCPQVLIQKHLVR 1380
 TWSTCAFTIQAIENLLGDEGKPLFGALQN RQHNGLKALMQFAVAQRITCPQVLIQKHLVR
 Sbjct: 1326 TWSTCAFTIQAIENLLGDEGKPLFGALQN RQHNGLKALMQFAVAQRITCPQVLIQKHLVR 1385

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